

on the COVER



A dragonfly eyes his prey in the Everglades marsh.

Aquatic plant cuttings are harvested from an established stormwater treatment area and then moved to a newer one to speed the growth of desirable plant communities.



Water quality testing is done from small platforms, large pump stations, airboats, even float helicopters. The data are collected week in and week out, year after year, to assess environmental conditions and document progress in Everglades restoration.

Heat, bugs and strict protocols

Collecting water quality data with...

KEVIN NICHOLAS
Field Sampling Supervisor,
Water Quality Monitoring Division

It's extremely hot out here. And buggy. But Kevin Nicholas isn't noticing. He's focused on the contents of his District van, parked in a stormwater treatment area in what feels like the middle of nowhere.

Inside the van are supplies that you would expect to find in a scientific laboratory: specialized containers, chemical solutions, technical instruments, even a computer. Nicholas is here to do what a dozen District employees do every day, collect water samples from field sites for laboratory testing. He and his teams are out every week of the year, fulfilling legal requirements to monitor phosphorus levels in canals, reservoirs and impoundments throughout the District. Their work provides the data – and the backbone — to support Florida's efforts to improve water quality for the Everglades.

On this hot day in June, Nicholas demonstrates the strict protocols required for a sampling procedure: Rubber gloves go on his hands; protective plastic goes on the van flooring; a large tray goes on the plastic; and a lidded collection bucket goes on the tray.

A DAY AT THE DISTRICT

A sampling instrument is removed from its protective housing.

DIP, LIFT, DIP, LIFT, DIP LIFT

That's just the start. At the collection site – a small wooden platform near a canal – the instrument is properly "rinsed" three times: dip, lift, dip, lift, dip, lift. Then with a snap-release of the sampling instrument, a water sample is collected and brought to the lab-in-a-van. Following procedure, a small quantity of water is released into the collection bucket: swish around, pour it out, swish again, pour it out. The remaining sample, about a quart, is poured in.

There's more. Small collection bottles-each labeled with specific instructions for filtering or preserving with acid or leaving untouched – are methodically filled from the bucket's spout. They are put on ice in a cooler and carefully coded to ensure an unbroken "chain of custody" between the field and the lab. The bucket is thoroughly rinsed with deionized water that is marked with a tracking number. Nothing goes undocumented.

Water quality tests on these samples provide information on phosphorus levels as well as pH, dissolved oxygen, nitrogen, pesticides, mercury and trace metals. At times Nicholas and his crews also collect soil and fish samples. Vans are used to reach many of the monitoring sites, but access to some locations requires an airboat or float helicopter. Yet every collection must be done with the same meticulousness demonstrated today.

DATA BACKBONE OF DECISION-MAKING

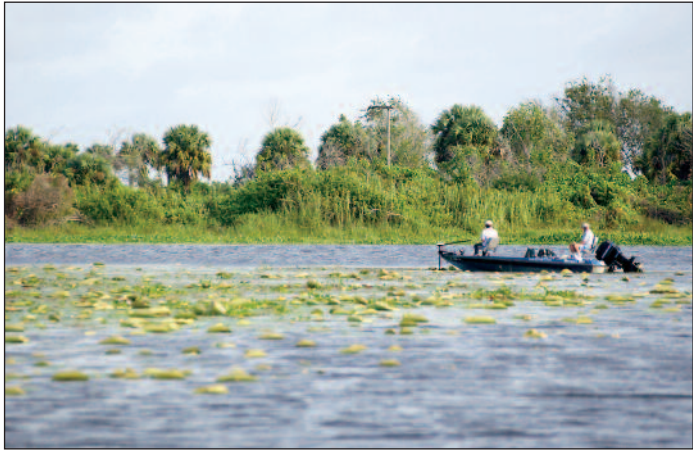
Nicholas says, "People say to me, 'You just fill bottles. What's the big deal?'" But when his work is used to make water management decisions, to evaluate million-dollar land purchases for treatment wetlands, to provide evidence in federal and state courts, to report results to the Governor's Office – it had better be good.

"Our goal, everyday, is to produce the highest quality, legally defensible water quality data possible," Nicholas explains, "and we do it 99.9 percent of the time." That goal is achieved by strict adherence to field-testing procedures, following laboratory protocols, calibrating instruments,



In the field, Kevin Nicholas uses a 'ruggedized' laptop computer and a sonde (measuring device) to electronically record a variety of water quality data. These instruments provide high-tech accuracy, but they are no substitute for the consistency and meticulous attention to detail each field crew member brings to the job.

checking over field logs, fine-tuning equipment and attending to every other detail imaginable-no matter how hot and buggy it gets.



The Lake Okeechobee Protection Plan is a comprehensive, interagency plan designed to restore and protect the lake. The goals are to improve water quality and implement long-term solutions through specific components designed to reduce the amount of phosphorus entering the lake from internal and external sources.

'Our Lake, Our Future' Plan to Speed Recovery of Ailing Lake Okeechobee

District creates special Lake Okeechobee committee to help carry out plan

Lake Okeechobee was dealt a harsh hand by Mother Nature – and she's not folding. Last year's multiple hurricanes and associated heavy rainfall churned up sediment and increased the amount of stormwater entering the lake, resulting in

poor water quality, murky water and high water levels that continue to persist with heavy rainfall this year. Submerged plants, which provide oxygen and habitat for fish, are vanishing because sunlight cannot penetrate the mud-colored water.

Recognizing the urgent need to speed up phosphorus-reduction projects to help recovery efforts for the ailing lake, Florida Sen. Ken Pruitt recently announced the "Our Lake, Our Future" plan of action. The 2005 Legislature, with strong support from Governor Bush and the citizens of Florida, passed new legislation to:

- rapidly implement the Lake Okeechobee Protection Plan;
- require implementing agencies to develop priorities for annual budget requests;
- further promote and implement agricultural waste management techniques called "best management practices;"
- continue to reduce maximum daily phosphorus loads entering the lake; and
- review operational schedules for Lake Okeechobee, its tributary basins and lakes, and connecting estuaries.

"Approximately \$96 million have been allocated toward Lake Okeechobee cleanup efforts since 2000; that is just the proverbial 'drop in the bucket' of the total that will be needed to restore this majestic wonder," Pruitt said. "We expect funding for Lake Okeechobee protection to increase in future years."

To carry out the "Our Lake, Our Future" plan and other collaborative lake cleanup efforts, the South Florida Water Management District has established a new 22-member Water Resources Advisory Commission (WRAC) Lake Okeechobee Committee to recommend actions to expedite collaborative lake recovery projects. Committee members represent environmental interests, agricultural communities, government agencies and tribal representatives from throughout southern Florida.

"While this action is not an overnight quick fix for the lake, it will help us complete needed projects as fast as possible," said District Governing Board Member and WRAC Chair Michael Collins. "Until we have those much-needed projects in place, we are limited in our choices when it comes to moving and treating vast quantities of water. It will take a collaborative effort with a regional view of a shared resource to get the job done."

The first monthly WRAC Lake Okeechobee Committee meeting was held June 29 in West Palm Beach. Upcoming meetings are scheduled for July 27 in Okeechobee and Aug. 31 in Stuart. For additional information about meeting dates, locations, times and agendas, contact Rick Smith at (800) 432-2045, Ext. 6517.